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ABSTRACT

One function of a Human Subjects Committee is to review the possible adverse effects of ethically problematic experiments. The concerns of an institutional review committee about the possible adverse effects of an ethically-problematic "cheating" study were examined with regard to the actual effects reported by the subjects. Retrospective reactions of undergraduates (N=36) in a cheating study were compared with those of participants (N=42) in two ethically-neutral studies. Cheating-study subjects reported more feelings that the research had entailed deception, and experienced more anxiety and embarrassment than subjects in the other two studies. However, even those who reported feeling "quite a lot" of anxiety or embarrassment did not report a negative "overall response" to their participation. Most subjects reported positive attitudes toward the research experience. The three groups did not differ in response to questions concerning informed consent, coercion, confidentiality, invasion of privacy, the harmfulness of deception, regrets about participation, or attitude toward social science research. Findings suggest that the concerns of the Review Board were not borne out to any appreciable extent, perhaps due to the extensive debriefing and precautions taken to assure anonymity by the researchers. (Author)

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ETHICAL ISSUES IN RESEARCH: HOW HARMFUL IS DECEPTION?

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Presented at the annual metting of the Eastern Psychological Association, April, 1980.

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Ethical Issues in Research: How Harmful is Deception?

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This report compares the apprehensions of a Human Subjects Committee concerning the possible adverse effects of an ethically problematic experiment with the actual effects as reported by the subjects after participating in the experiment. Ironically, the topic of the experiment was honesty, or more specifically, the relationship of moral judgment to frequency of cheating (Malinowski, 1978). In the study, the experimenter first administered a measure of moral judgment in class to male undergraduates. Later the subjects participated individually in what they were told was a study of "attention-concentration." Each was asked to do his best on a difficult motor coordination task. On his practice trials false norms gave him the impression that his performance was quite poor. Then he was left alone to record the scores for his test trials. In another room his actual scores were being recorded, thus permitting detection of cheating if the subject recorded falsely high scores. Under these conditions 41 of the 53 subjects cheated.

Although Malinowski's initial research proposal included provisions for confidentiality and debriefing, it met with a number of strenuous objections from his college Review Board (Committee for the Protection of Human Subjects). They wrote to him as follows:

> The project may result in intimidation of...students who participate...they may be embarrassed and reluctant to take other courses in psychology. They may believe that others know they have cheated....Without prior consent and without anonymity subjects are entrapped in a cheating situation and then learn that their cheating, if it occurs, has been observed. Such concealment of the true nature of the project together with 'being caught cheating' could cause mental stress in the subjects.

Malinowski was, however, given an opportunity to revise and resubmit his proposal. Among other things, he worked out a procedure for insuring anonymity (after the data were obtained) and a more extensive debriefing, after which the subject was told that he was free to withdraw and take his data with him. If a subject chose to leave his data with the researcher, he then signed a written consent form. As it turned out, every subject agreed to participate. Moreover, none seemed upset about the experience and none complained subsequently.

Nevertheless, when another of us (C. Smith) submitted a research plan at a different institution proposing to use Malinowski's method, but including all the safeguards Malinowski had worked out, his Review Board raised many of the same questions that the first Review Board had raised. They were concerned about the possible adverse effects of such procedures on the research participants.

Presented at the annual meeting of the Eastern Psychological Association, April, 1980.

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At that point we decided to try to locate Malinowski's subjects, even though two years had elapsed, to see if we could document the effects of their participation in the cheating study. We also decided to compare their retrospective reactions with those of participants in one or more ethically neutral studies which could serve as a baseline for comparison.

Method

Subjects

Our subjects were students, or former students, at a metropolitan-area college who had participated in one of three psychology studies during 1976-1977. (See Table 1.) Responses were obtained from 36 of the 53 participants (68%) in the cheating study (Group A), from 31 of the 49 participants (63%) in Study B, and from 11 of the 16 participants (69%) in Study C. However, 8 persons responding in Group B said they did not recall enough to answer the questionnaire. The numbers vary for different analyses because some respondents omitted some questions.

Recruitment. A questionnaire was mailed, together with a cover letter explaining that this was a survey to evaluate the effect on students of participation in social science research and that the questionnaire had been approved by the college Committee for the Protection of Human Subjects. Anonymity was assured. Because we wanted respondents to express their thoughts frankly and without fear of reprisal, only the name of the first author, who was unknown to the recipients, appeared on the letter.

A few days after the letter was sent, the second author, also unknown to the students, telephoned to ask if the questionnaire had been received and if the recipient would cooperate. Most of those to whom she spoke agreed to return the questionnaire and did so. Some persons were never reached, however, because it was not possible to locate them.

Design

Our plan called for comparing the aftereffects of the cheating study with those of two less ethically problematic studies.[1] Study B involved minimal deception--having subjects impose sentence in fictional criminal cases presented as real cases. The subjects for Study B were volunteers. The data were obtained anonymously during class periods. Study C, which involved no deception, dealt with alpha waves and personality characteristics. Subjects for Study C were students in a psychology course who were asked to participate in course-relevant research. Their questionnaire responses revealed that some of these students felt that they had not been given a choice about whether or not to participate.

We were fortunate, in taking advantage of naturally occuring conditions, to have access to two reasonably appropriate comparison groups. They were students from the same college who had participated in psychology studies carried out during the same time period as the cheating study. As their questionnaire responses revealed, they were not significantly different from the cheating study subjects in reported overall grade point average or in their perception of the extent to which the researcher was responsible or competent.

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[1]The authors gratefully acknowledge the cooperation of the investigators who gave us the names of their subjects.

However, some differences between the comparison groups and the cheating study should be mentioned. First, the cheating study subjects were all males while subjects in the other studies were both males (N = 8) and females (N = 26). However, for the two comparison studies combined, there were no significant differences between males and females on any of the questionnaire items, so males and females were combined for all analyses. Also, in the cheating study subjects were tested individually and paid for participating. In the other studies, the data were obtained in the classroom setting and students were not paid. Finally, the comparison subjects were significantly older than the cheating study subjects ($p < .02$) primarily because subjects in Group C were junior and senior psychology majors whereas those in Groups A and B were mostly freshmen and sophomores majoring in a variety of disciplines. However, it is not apparent, from the nature of our results, that any of these differences invalidated these groups for purposes of comparison.

Questionnaire Development

A preliminary questionnaire was prepared based on issues raised by the two Review Boards and on issues discussed in the APA bulletin on Ethical Principles in Research (1973). The questionnaire was revised after pretest responses were obtained from 27 male and female college students who had recently served as subjects.

Results

The purpose of these analyses is to discover whether there were distinctive effects of participating in an ethically-problematic study. In most instances, responses of the cheating study subjects are compared with those of the subjects in the other two groups combined. However, where these groups differ, results are reported separately for each. All probabilities are for two-tailed tests. (When expected cell frequencies were low, Fisher's Exact Test was used.)

First, let us look at some items where we might expect differences if the questionnaire responses validly differentiate among the three studies. In particular, to a greater extent than the comparison subjects, cheating study subjects should report that the research entailed deception. As Table 2 shows, they did, in fact, significantly more often answer "yes" to the question "Was there any deception employed in the research?" ($p < .001$).

The research experience of the cheating study subjects might also be expected to have aroused distinctive feelings. As Table 5 shows, in response to the question "To what extent did you experience any of the following thoughts or feelings while participating in the research?" they reported significantly more "anxiety" ($p < .02$) and "embarrassment" ($p < .005$). There was also a near-significant tendency ($p < .08$) for them to report more "guilt." It should be pointed out, however, that the mean for the strongest of these feelings, "anxiety," places it closer to "slight" than to "moderate." (See Table 5).

Ethically-Relevant Effects

The following questions were intended to establish whether a subject felt that his or her rights had been protected. Two questions were related to "informed consent": "Did the researchers fully explain to you, at the outset,

what you would be asked to do as a subject in the study?" and "Was the purpose of the research explained to your satisfaction?" Cheating study subjects did not differ significantly from the others with respect to either of these questions. Most subjects answered "yes" to both questions. A related question asked subjects whether their participation had been voluntary or coerced. As Table 3 shows, all but 1 of the cheating study subjects said their participation had been voluntary. They did not differ from Group B subjects in this respect, but they did differ significantly from subjects in Group C, 46% of whom said they had felt "somewhat coerced" ($p < .004$). Apparently the research had been presented to Group C subjects as a course-relevant activity without giving them an explicit opportunity to volunteer or withdraw.

The next two questions dealt with confidentiality. One read: "Did you feel that proper precautions would be taken to insure that your name or identity would not be revealed?" As Table 4 shows, significantly more cheating study subjects than comparison subjects answered "yes." ($p < .02$). There were no significant differences in response to the question "So far as you know, was your identity protected?" Ninety one percent of all subjects answered "yes."

Invasion of privacy was the subject of two questions: "Did the researcher request any information that you felt was too personal?" and "Do you feel that any aspect of the research violated your right to privacy?" The three groups did not differ significantly on either of these questions. This is particularly interesting in view of the fact that the cheating study subjects knew that cheating had been detected. They also knew, however, that the researcher had no way of knowing <u>which</u> subject had cheated, and this procedure may have alleviated concern, because not a single cheating study subject said the research violated his right to privacy.

The next set of questions dealt with deception. Seventy five percent of the cheating study subjects felt their experiment involved deception, while only 1 subject in Group B and 1 in Group C said their studies employed deception. (As noted in Table 2, this difference is significant.) There were two follow-up questions for respondents who said their study had involved deception. In response to the question: "If yes, do you feel the deception was harmful?" 100% of the cheating study subjects responding answered "no," while the two comparison subjects responding answered "yes." These small numbers preclude statistical comparisons, but the results speak for themselves. No cheating study subjects felt the deception was harmful.

In response to the question "Do you feel that the deception was justified by the scientific purpose of the research?" Only two persons, both in the cheating study, said "no." One wrote: "I don't think psych research has any scientific purpose."

Whether subjects perceived that they were or were not treated ethically was dealt with by two questions. One read "Did you have any reservations about the way you or other participants were treated in the research?" There were no significant differences among the answers of the three groups. Only four subjects had reservations, three of whom were in the comparison groups. Another question read: "Do you think there were any ethical problems in the way you or other participants were treated or in what you were asked to do?" Again there were no significant differences. However, the written comments of some of the cheating study subjects who answered "yes" to this question may be of interest.

One said subjects were "lied to." When he gave his overall response to having participated in the experiment, however, he checked "positive." Another said "You were encouraged to cheat." His overall response was "neutral."

A related question may get at the issue of "entrapment." It read: "Did you have any regrets about the way you behaved as a research participant?" Again, however, the three groups did not differ, and the smallest percentage of "yes" answers came from the cheating study (one subject).

General Effects

Finally, a series of questions dealt with general effects, both positive and negative, of the research experience. None of these items revealed any group differences. Slightly, but not significantly, more cheating study subjects said they learned something of value from participating, and they also tended to find the research more interesting than the comparison study subjects.

One question gave a list of words and phrases and asked the respondents to check the ones that described their present feelings toward their research participation. There were no significant differences between the cheating study subjects and the comparison subjects in the proportion who checked such words as: angry, suspicious, emotionally upset, taken advantage of, or regretful of having participated. Of special interest was the word "trusting," since one might expect deception to have an effect on trust. But again there was no significant difference.

Two questions dealt with the effect of the research experience on attitudes toward social science research. The three groups did not differ in either favorableness of attitude toward research or in frequency of reported participation in subsequent research. Only 4% of all subjects held an unfavorable opinion toward social science research.

Finally, subjects were asked to indicate their overall response to having participated in the research on a scale ranging from very positive to very negative. As Table 6 indicates, the group means were all on the positive side of neutral and did not differ significantly.

Conclusion

The long-term effects of research participation are of considerable interest. The present study is unusual, if not unique, in the length of its follow-up period. Considering this interval, it is noteworthy that the subjects were discriminating in their responses. There were few complaints from any of the groups, but those subjects who did express negative reactions were highly selective in their responses.

What then, can be said about the effects of the cheating study procedures? After more than two years, few adverse effects are discernable. Only two such effects are statistically significant. They are that subjects in the cheating study experienced more "anxiety" and "embarrassment" while participating in the research than subjects in the other two groups. Table 7 shows the number

of subjects experiencing "quite a lot" of each emotion. These findings bear out, to some extent, one of the concerns of the Review Boards. The experience was apparently relatively stressful or unpleasant for some subjects. It is interesting, however, that none of the subjects who reported experiencing "quite a lot" of anxiety and/or embarrassment indicated, at the end of the questionnaire, that their response to having participated was negative, or that their attitude toward social science was unfavorable. Also, five of the cheating study subjects felt there were ethical problems in the way participants were treated, while only one subject in the other two groups gave that response.

On the other hand, there were no significant differences among the groups with respect to informed consent, coercion, confidentiality, invasion of privacy, the harmfulness of deception, regrets about participation, or attitude toward social science research. If anything, the responses of the cheating study subjects were more favorable regarding most of these matters. These results illustrate the importance of having comparison groups in order to evaluate the frequency and seriousness of negative reactions. (See also Coe & Ryken, 1979.)

One may ask whether it is appropriate to assess experimental effects by means of subjects' reports of those effects? It is possible, for example, that such reports are subject to distortion due to cognitive dissonance. Dissonance research shows that a person who voluntarily undergoes an unpleasant experience may come to think of it in more positive terms (Brehm & Cohen, 1962). We acknowledge the possibility that the reports of some subjects may be biased under some conditions and that indirect methods of assessing experimental effects might fruitfully be employed as well. However, we tend to believe that our respondents' reports were not seriously biased for two reasons. First, the responses to different questions of most subjects were variable rather than uniformly favorable or unfavorable. Second, some research in which comparable subjects were asked to evaluate various ethically-problematic experimental procedures that were hypothetical revealed that deception was viewed as mildly, rather than strongly, objectionable (Epstein, Y., Suedfeld, P. & Silverstein, S. 1973). This finding is consistent with our evidence which suggests that subjects do not regard deception, per se, as particularly serious.

Although there appear to have been few, if any, serious negative reactions to the cheating study procedures, these results do not give researchers a license to deceive. Other types of deception, in other contexts, may have different effects. There is surely no general answer to the question "How harmful is deception?"

Nevertheless, the reactions of the cheating study subjects do not bear out the concerns of the two Review Boards to any appreciable extent. Our results suggest that the aspects of research seen as problematic by participants may not always be the same as those assumed to be important by members of review boards.

Although we believe the Review Boards exaggerated the possible negative effects of the cheating study procedures, we also acknowledge that the initial Review Board was instrumental in bringing about some of the precautions taken

to safeguard the rights of the subjects. In particular, we believe that the extensive debriefing not only enabled the subject to see the reason for the deception, but permitted him to learn something of value from the experience. While there may be some circumstances in which a debriefing is not necessary, or even harmful, we believe that a thorough debriefing should normally be regarded as a basic right of a research participant. We recommend that debriefing be much more extensive than is customary and that it be adapted to each participant's emotional state, needs, and questions.

Review boards are supposed to be constituted in such a way as to insure a balanced representation of different relevant points of view, but most boards have not utilized one of the most authoritative sources available to them—the experimental subject. It is hoped that an accumulating body of knowledge of the effects of different research procedures will provide a more empirical basis for review board decisions and for the formulation of governmental regulations concerning the welfare of human subjects.

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Ethical Issues in Research: How Harmful is Deception?

(All probabilities are for two-tailed tests.)

Group A: Cheating Study
Group B: Imposing Sentences in Criminal Cases
Group C: Alpha Waves and Personality

Table 1
Number of Respondents in Each Group

	Original Number of Participants	Number for Whom Addresses Available	Number Returning Questionnaire
Group A	53	44	36
Group B	49	46	23 (+ 8)[1]
Group C	16	16	11

[1] Eight respondents from Group B indicated that they did not recall enough to answer the questionnaire.

Table 2

"So far as you know, was there any deception employed in the research?"

	Yes	No	Don't Remember
Group A	75.0% (27)	22.2% (8)	2.8% (1)
Groups B, C combined	3.0% (1)	69.7% (23)	27.3% (9)

Chi-square = 37.7, df = 2, $p < .0001$

Table 3

"At the time did you feel that your participation in the research was voluntary, or did you feel coerced?"

	Voluntary	Coerced
Group A	97.2% (35)	2.8% (1)
Groups B, C combined	75.0% (24)	25.0% (8)

Chi-square = 5.48, df = 1, $p < .02$
Group A vs. Group B, n.s.
Group A vs. Group C, $p < .004$, Fisher's Exact Test

Table 4

"When you completed your participation in the study, did you feel that proper precautions would be taken to insure that your name or identity would not be revealed?"

	Yes	No	Don't Remember
Group A	82.9% (29)	.0% (0)	17.1% (6)
Groups B, C combined	65.6% (21)	18.8% (6)	15.6% (5)

For Yes vs. No only, $p < .02$
Fisher's Exact Test

Table 5

"To what extent did you experience any of the following thoughts or feelings while participating in the research?"

(1 = not at all; 2 = slightly; 3 = moderately; 4 = quite a lot)

	Group A	Group B	Group C	Group A vs. Groups B+C		
				F	df	p <
Discomfort	M = 1.56	1.40	1.27			
	SD = .75	.82	.47	1.27	1/63	n.s.
	n = 34	20	11			
Pleasure	M = 2.16	1.83	1.81			
	SD = .88	.99	1.08	1.86	1/59	n.s.
	n = 32	18	11			
Anxiety	M = 2.41	1.57	2.30			
	SD = .99	1.08	.67	5.93	1/63	.02
	n = 34	21	10			
Self-Insight	M = 2.39	2.11	2.00			
	SD = 1.14	1.08	1.18	1.30	1/60	n.s.
	n = 33	18	11			
Embarrassment	M = 1.76	1.11	1.27			
	SD = 1.02	.46	.65	8.36	1/62	.01
	n = 34	19	11			
Guilt	M = 1.44	1.21	1.00			
	SD = .75	.71	.00	3.36	1/62	.08
	n = 34	19	11			

Table 6

"At this time my overall response to having participated in the research is:"

(1 = very positive; 2 = positive; 3 = neutral; 4 = negative; 5 = very negative)

	n	Mean	SD
Group A	36	2.36	.64
Group B	23	2.39	.66
Group C	11	2.64	1.03
	F = .64, df = 2/67, n.s.		

Table 7

Number of Subjects Experiencing "Quite a Lot" of Each Emotion

Emotion	Group A (N = 36)	Groups B + C (N = 34)
Discomfort	1	1
Anxiety	6	3
Embarrassment	4	0
Guilt	1	1